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3

Curricular and Instructional Considerations for Teaching Students With Disabilities in General Education Classrooms

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For as long as she can remember, Ms. Brown has been told that she and other general education teachers were not appropriately trained or qualified to teach students with a wide range of disabilities. She was told, "That's why we have special education classes and schools where students with special educational needs can get the specialized instruction they need." This made sense to Ms. Brown; besides, she had her hands full with her students who did not have disability labels. Though she occasionally taught a child with mild learning disabilities in her classroom, for the most part, students with more significant disabilities were never placed in her class. If a student seemed to be having difficulty keeping up with the academic expectations Ms. Brown had established for the class, she felt she was doing the right thing by referring the student for special education. This approach was supported by her colleagues and school system as well. Recently, people started talking about educating students with more significant disabilities in the general education classroom; they referred to it as "inclusive education." Ms. Brown felt that she had never excluded children before because of their disabilities, but rather, was trying to help them by sending them to a place that would better meet their

needs. Now she was about to have a student with more significant disabilities in her class. She wondered how this would work and what she could do to make sure it worked for her whole class.

We are in the midst of a major shift in educational service provision for students with disabilities in which they are increasingly valued and included in the same educational experiences that are available to students without disability labels. To extend the information presented in chapter 1 of this volume, we list seven characteristics of inclusive education (Giangreco, Baumgart, & Doyle, 1995), including:

1. All students are welcomed in general education classes in their local schools. The general education classroom in the school the students would attend if they did not have a disability is the first placement consideration, given individually appropriate supports and services.
2. Students are educated in classes where the number of those with and without disabilities is proportional to the local population (e.g., 10% to 12% have identified disabilities).
3. Students are educated with peers in the same age groupings available to those without disability labels.
4. Students with varying characteristics and abilities participate in shared educational experiences while pursuing individually appropriate learning outcomes with necessary supports and accommodations.
5. Shared educational experiences take place in settings predominantly frequented by people without disabilities (e.g., general education classrooms, community work sites).
6. Educational experiences are designed to enhance individually determined valued life outcomes for students and therefore seek an individualized balance between the academic or functional and social or personal aspects of schooling.
7. Inclusive education exists when each of the previously listed characteristics occurs on an ongoing, daily basis.

We will know that inclusive education has fully arrived when designations such as "inclusion school," "inclusion classroom," or "inclusion student" are no longer needed as part of our educational vocabulary because everyone is included (Giangreco, Cloninger, & Iverson, 1998).

As we usher in a new era of education in which children with disabilities are not summarily sent to special education schools and classes

because of their disability labels, the roles of all professional staff who work in schools with students who have disabilities are evolving. Nowhere is this more evident or more important than when considering the role of the general education teacher.

Several myths surrounding the needs of students with disabilities have been used to perpetuate the status quo. Over time, what Ms. Brown came to realize was that she had unwittingly bought into some of the historical myths of special education. Some of these myths are:

I. General education teachers are not capable of teaching students with disabilities.
2. Only special education teachers know the specialized approaches that are effective for teaching students with disabilities.
3. Specialized instructional approaches are beyond the capability of general education teachers within the context of a regular class.
4. Special education is synonymous with a place, such as a resource room, special education class, or special education school.
5. Curriculum content and grade level placement are synonymous; in other words, all children placed in a fifth grade class must do "fifth grade level" work.

Nationally, numerous demonstrations have exposed these myths as false (Giangreco, Dennis, Cloninger, Edelman & Schattman, 1993; Hunt & Goetz, 1997; National Center on Educational Restructuring and Inclusion, 1995; Salisbury, Palombaro & Hollowood, 1993; Stainback & Stainback, 1996; Villa & Thousand, 1995; York-Barr, Schultz, Doyle, Kronberg, & Crossett, 1996). Increasingly, these myths and their corresponding practices are being replaced by new standards. While these newer standards of practice are not necessarily common across the country, they are present to some extent in every state and they represent a fundamental shift in how increasing numbers of educators, parents, consumers, administrators, and community members are thinking about the education of students with disabilities. Some of the principles underlying these new standards include:

I. Qualified general education teachers with inclusive attitudes and appropriate supports can successfully teach students with disabilities, including those with severe disabilities.
2. The principles of teaching and learning are the same whether a student has a disability label or not, although these principles may

need to be applied differently, adapted, or used more systematically for some students.
3. Just as many instructional approaches used by special educators are effective when used with students without disabilities, many instructional approaches that are effective within general education can also be effective for students who have special educational needs.
4. When general education teachers expand their skills to address the diversity presented by their students with disabilities, they often learn skills that improve their teaching for all students.
5. Special education, namely, specially and individually designed instruction, is a service, not a place. It is portable and therefore need not be bound by location.
6. Grade level placement and curriculum content need not be synonymous. Rather, grade level placement and curriculum content can be independent of each other. For example, in a fifth grade class, while most students might be pursuing what people think of as "fifth grade" curriculum (knowing that varies from place to place), some students will be pursuing individually appropriate curriculum content that is below or above that level through the use of multi-level instruction or curriculum overlapping (both are discussed later in this chapter).
7. We need to change the way we think about educating students with disabilities so that, regardless of what positive intentions we might have, our actions (e.g., to include or not) are not considered a "favor" to students with disabilities or their families. Appendix A to Part 300 of the Code of Federal Regulations (34, CFR 300) (March 12, 1999) states:".. . IDEA presumes that the first placement option considered for each disabled student by the student's placement team, which must include the parents, is the school the child would attend if not disabled, with appropriate supplementary aids and services to facilitate such placement (p. 12471).

With the advent of inclusive education, a common scenario has been repeated nationally whereby special educators and parents ask administrators and general education teachers for access to the general education classroom for students with more and more severe disabilities. The promise is made that the general education teacher will not be inconvenienced or asked to do more. Initially, many general education teachers accept such invitations to participate in "inclusive education" based on the

premise that they will function primarily as a "host" rather than as the teacher for the student with disabilities. In this "foot in the door" approach, general educators often are promised that special educators and others (e.g., paraprofessionals and related services providers) will attend to the educational needs of the student with disabilities. Additionally, many teachers are given the message that they have the option to accept or reject the student with disabilities in their class. Both premises, "hosting" and "the option to accept or reject," have conceptual, ethical, and legal flaws (Giangreco, 1996a; Giangreco, Dennis, Cloninger, Edelman & Schattman, 1993; Laski, 1991). In fact, the attitudes, decisions, and actions of general education teachers are critical factors in determining the success of a student with a disability in a general education class (Giangreco et al, 1993; Giangreco, Edelman & Nelson, 1998). The general education teacher may be the single most important school staff member in determining the success of a student with disabilities in the general education classroom.

Some people have suggested that in situations where paraprofessionals are assigned to a student with disabilities, the paraprofessionals are the key pieces in the personnel puzzle. While this may be true in some situations, recent research suggests that when the paraprofessional assumes the role of "teacher," a variety of problems can result that have an adverse, though unintended, impact on students with disabilities (Doyle, 1995; Giangreco, Edelman, MacFarland & Luiselli, 1997). For example, students with the most complex learning challenges inadvisedly may receive the majority of their instruction from the team member who typically has the least amount of training.

If you, as a general educator, are unaccustomed to having students with disabilities in your classroom, you are not alone in your anxieties, apprehensions, and even fears about inclusive education. These concerns are real and should be taken seriously by colleagues and families. The purpose of this chapter is to help you acquire the attitudes and skills that will assist you in successfully teaching your students with disabilities, rather than excluding them from the classroom or segregating them within it. Recently, we heard a teacher say, "I am concerned that inclusion takes time away from the regular education students because the teacher's emotional energies and attention are redirected toward the challenging student." Although we know that this sentiment may be shared by some general education teachers, it reflects one of the most basic problems facing students with disabilities and their families, namely, that they are considered to be in a different category than "regular" students. Embedded in

that sentiment is the inference that the needs of "regular" students come first.

Almost every classroom has students without disability labels who sometimes need extra "emotional energy and attention" from their teachers for any host of reasons (e.g., impact of divorce, child abuse, challenging temperament, issues of normal adolescent development). The same holds for students considered "gifted." Someone could say, "Aren't those gifted students an emotional drain on the teachers because they require specialized planning to be sufficiently challenged and therefore they take teacher time and attention away from the majority of the class who are all at a similar level?" As teachers, we have to be prepared to offer differential amounts and types of emotional energy, attention, support, and individualization to our students, regardless of labels and needs. Good teachers build on the individual strengths of each student and recognize that all students have something valuable to contribute to the classroom community.

As you know, teaching takes enormous amounts of emotional energy under any circumstances. As many teachers who have taken on the challenge of inclusion have come to realize, the energy they put forth is often rewarded in their own personal and professional development as well as in the development of their students. We do not mean to present a picture of inclusive education as seen through rose-colored glasses. Can inclusive education be challenging? Sometimes it can, as can general education. Should teachers who work with increasingly challenging students, regardless of their labels, receive appropriate supports? Absolutely; such supports are essential to successful inclusion. We can start the process of giving each of our students an equal opportunity by considering all of them as our students who are welcome in our classrooms. As inclusive efforts begin, you can be on the lookout for common problems, such as having students who are physically placed in the general education classroom, but not really included as part of the classroom program or activities (e.g., students frequently separated with an instructional assistant). Another problem to watch out for is including students with disabilities in classroom curriculum, instruction, and activities, but without the necessary adaptations that will make participation meaningful.

One major goal of inclusive education is to provide shared meaningful learning experiences for students with and without disabilities within the context of classroom activities that address the individualized learning needs of each student. This is an important task that may take a bit of work

to understand and implement, but is possible given support from a collaborative team (see chapter 4). This collaborative team comprises core members who spend time with the student daily, such as the teacher, parent, special educator, and paraprofessional, as well as the student, when appropriate. Extended members may include related services personnel who interact with the student less frequently and sometimes on an intermittent basis. Teams may also access other support personnel resources when it is situationally necessary. These individuals tend to have highly specific, short-term interactions with the team (e.g., a consultant who helps design or select a piece of specialized equipment). The one characteristic that brings all of these individuals together is arguably the most foundational characteristic of a collaborative team, namely, *having common goals (Giangreco, 1996b). This is not to be confused with the common and unteamlike practice of group members agreeing to each have their own goals for a student which reflect the orientation of their particular disciplines (e.g., physical therapy, occupational therapy, speech/language pathology). See chapter 4 for more information on collaborative teamwork.*

A competent, caring general education teacher who is effective with students without disabilities already possesses most of the critical skills necessary to successfully educate students with all kinds of learning challenges, including various disabilities (Giangreco, 1997). However, when teaching students with disabilities, you and the members of your collaborative team may need to apply the principles of teaching and learning in different ways. The remainder of this chapter addresses five of the most common questions posed by general education teachers who are interested in successfully including and teaching students with disabilities in their classrooms. These five questions, each related to curriculum and instruction, are:

1. What does a quality curriculum for a student with disabilities in a general education classroom look like?
2. How should the content of the curriculum be determined?
3. How can individualized curricular content be addressed appropriately in the classroom when students without disabilities are pursuing different curricular content?
4. How can appropriate learning opportunities to include students with disabilities in classroom activities be identified or adapted?
5. How can instruction be individualized within the context of general class activities?

What Does a Quality Curriculum for a Student With Disabilities in a General Education Classroom Look Like?

When considering educational curriculum content for students *with* disabilities, it is important to recognize that the population of students labeled "disabled" is enormously diverse. For example, when a student has a physical disability alone, with no concurrent cognitive disabilities, it is generally accepted that he or she should pursue the full general education curriculum established for students without disabilities. Similarly, students with mild learning disabilities also are generally expected to pursue much, if not all, of the general education curriculum. So, for many students with disabilities, the question is not what these students should learn, but rather how they will access the curriculum and what accommodations will be needed. Decisions about curricular selection become more complex and the curricular content tends to be more individualized when students have more severe disabilities or have combinations of physical, cognitive, sensory, or behavioral disabilities.

A quality curriculum for a student with disabilities includes learning outcomes that are at an individually appropriate level and are pursued within typical class activities (e.g., small cooperative groups, unit-based projects). Selecting appropriate learning outcomes has long been, and continues to be, considered a marker of educational quality for all students. Individually determined curricula for students with disabilities should include a small set of family-selected priorities to establish a focus for instruction, as well as a breadth of curricula that allows the student opportunities to explore many options that coincide with state or local standards.

As team members review general education curricula, they are often surprised to learn that many of the learning outcomes in them are applicable to students with disabilities, including those with severe disabilities. Although this core of curricular content should be reasonably attainable based on the student's current level of functioning and characteristics, a quality curriculum also should provide ample opportunities for students to surprise us *with* their capabilities. Therefore, we should never presume to know the upper limits on a student's abilities, especially if the student has never been exposed to something or received competent instruction.

We should expose students with disabilities to, and instruct them in, a full range of general education curricular activities to complement more traditional life skills. Too often we artificially limit curricular opportuni

ties for students with disabilities based on our own preconceived notions. Because of this, few students with severe disabilities have had access to general education classrooms or curriculum until recently. As a student progresses through school, the emphasis placed on various curricular options can be adjusted based on actual experiences and evaluative data rather than on speculation based on disability labels or stereotypes.

How Should the Content of the Curriculum Be Determined?

Historically, determining curricular content has been the sole province of school professionals. This, too, has changed significantly. Increasingly, parents are involved in selecting priority curricular content for their children using any number of available approaches, such as MAPs (Making Action Plans), PATH (Planning Alternative Tomorrows with Hope; Pearpoint, Forest, & O'Brien, 1996), COACH (Choosing Outcomes and Accommodations for Children; Giangreco, Cloninger, & Iverson, 1998), and Personal Futures Planning (Mount, 1994). Such active solicitation of parent input can have a positive impact on relationships between families and professionals. Parental selection of priorities does not infer that professionals are nonessential, but rather that their curricular role has evolved from telling parents what is best for their child to assisting families in determining and articulating their own priorities based on their individual and cultural perspectives.

Important aspects of curriculum design today are choice and self-advocacy by students with disabilities (Nietupski, Hamre-Nietupski, Curtin, & Shirkanth, 1997). Such choice-making to select curricular content may coincide with the cultural norms of the family and/or the norms of the community. For example, young children may be given choices within the context of activities, while older students may select some or all of their own learning priorities. Professionals still retain an important role in developing the breadth of curricular content that is available to students in the school.

To augment the general education curriculum content, ecological analysis (Brown, Nietupski, & Hamre-Nietupski, 1976) has been used to select individualized curricular content. Using ecological analysis, curriculum is developed based on the real-life skills needed to function in current and future environments. While this approach remains eminently viable, a variation has been developed that shifts the context to current and desired future *valued life outcomes* (e.g., meaningful personal relationships, health and safety, meaningful activities in various places, choice, and control) as

determined by the student with disabilities and or his or her family (Giangreco, Cloninger, & Iverson, 1998). This approach is grounded in the life outcomes parents have said they value in helping their child pursue a "good life." By focusing on individually determined valued life outcomes, educational teams create a common denominator necessary to function as a team and provide meaning to their activities.

How Can Individualized Curricular Content Be Addressed Appropriately in the Classroom When Students Without Disabilities Are Pursuing Different Curricular Content?

One of the most common and anxiety-producing questions asked by general education teachers is, "How do you expect me to incorporate an individualized curriculum for a student with- disabilities while teaching the rest of my class?" Unfortunately, all too often, the solution to this challenge is for a paraprofessional to operate a parallel educational program in the back of the classroom. For an example of this, see case 10 in this volume, titled, "Help, With Strings Attached." Such an approach is not an example of inclusive education and minimizes the potential benefits of participation in a general education class. Delegating primary instructional responsibilities to a paraprofessional also may relegate students with disabilities to receiving inadequate, unsupervised instruction. Two alternatives include multilevel curriculum and instruction and curriculum overlapping (Giangreco & Putnam, 1991).

Multilevel curriculum and instruction occurs when a student with disabilities and nondisabled peers participate together in a shared activity (e.g., science lab experiment) and students have individually appropriate learning outcomes at multiple levels, but all within the same curriculum area (e.g., science). While one student may be learning at a basic knowledge or comprehension level, another student simultaneously may be working on an application or synthesis level. For example, imagine second grade students playing a small-group social studies board game devised by their teacher to teach them about their neighborhood, town, and state. The teacher has prepared a set of 10 game cards for each student that target individual learning outcomes. For one student, the game cards require applying knowledge about the roles of community helpers (police, fire fighters, store clerks, postal workers) by moving game pieces to respond to scenarios on cards (e.g., "Move your player to the place where

you might go if you wanted to send a card to your grandmother for her birthday"). Another student is learning to answer questions about where he or she lives (e.g., his or her street address, phone number, recognizing his or her neighbors). A third student is using map skills such as north, south, east, and west to respond to questions (e.g., "If you started at the book store, went two blocks north and one block east, where would you be?"). In this example, all the students have social studies learning outcomes that have been individually selected to match their level of functioning and needs.

Multilevel curriculum can include variations across subject content, level of learning outcomes pursued, or both. For example, in one seventh grade social studies class focusing on American history from the revolution through the Civil War, the topic would be the same for Joseph, a student with disabilities, as for his classmates, but the level of learning outcomes would be adapted. His studies would focus on American history but be adapted to an appropriate level (e.g., historical people, places, and events). In Joseph's algebra class, the subject content for Joseph would be different from that of his classmates, focusing on basic computation (e.g., adding, subtracting), and the level and quantity of the learning outcomes would be adapted as well. In both classes Joseph would be working on individualized learning outcomes within the same curriculum area as his classmates.

Curriculum overlapping occurs when a student with disabilities and nondisabled peers participate together in a shared activity (e.g., science lab experiment) and students have individually appropriate learning outcomes, but from different curriculum areas. Nondisabled students could have science objectives, while the student with disabilities might have communication or social skill objectives for the science lab activity. Imagine, for example, a high school biology class in which lab teams of three students each are assembling a model of a human heart. Two of the students have goals related to the identification, anatomy, and physiology of the human heart. The third student, who has severe disabilities, participates in helping to assemble the model heart but is working on communication and social skills (e.g., taking turns, following instructions, describing events, maintaining socially acceptable behavior).

Curriculum overlapping can also address other general education curriculum areas. You might recall Joseph, the seventh grade student with disabilities, who was participating in social studies and math via multilevel curriculum. His team agreed that his participation in French class would be through curriculum overlapping. He would be exposed to French words, language, and culture, but there would be no expectation of competencies in

French. The team viewed his participation in French class as providing him with opportunities to pursue learning outcomes that had been identified as important in his English class, such as listening, speaking, reading, writing, and spelling. For example, his spelling words from English class could be duplicated in French and he could practice reading and writing both sets, using them in sentences, and reading them orally.

Curriculum overlapping occurs when learning outcomes from two or more curriculum areas overlap within the same activity. Opportunities for both curriculum overlapping and multilevel curriculum and instruction are abundant in classrooms where students participate in active learning.

How Can Appropriate Learning Opportunities to Include Students With Disabilities in Classroom Activities Be Identified or Adapted?

All too often, school personnel expend significant effort developing an IEP that is not necessarily reflected in the daily schedule of activities for a student. Students may even be welcomed and included in general education activities, but not be pursuing the individualized learning outcomes that were selected as priorities in their IEP. Use of a Scheduling Matrix (Giangreco, Cloninger, & Iverson, 1998), is designed to prevent this from happening by explicitly comparing a student's IEP goals and additional learning outcomes to a list of the class's planned activities (e.g., arrival routine, opening routine, language arts, science, physical education). The scheduling matrix is a divergent activity where team members consider the possibilities for working on a student's learning outcomes within the various class activities. This process is aided by decisions made by the student's team about the nature of participation (e.g., multilevel, curriculum overlapping) in various class activities.

A student schedule is then developed, based on possibilities generated using the Scheduling Matrix. Deciding which learning outcomes will be addressed in which daily classes or activities requires team members to consider and balance a variety of issues (Giangreco, Cloninger, & Iverson, 1998):

- Are there sufficient opportunities for the student to work on identified learning priorities?

- Are there sufficient opportunities that pertain to the student's identified additional learning outcomes?

- Does the student's schedule follow the class routine as much as possible?
- Are learning outcomes and general supports addressed at the most naturally occurring times?
- Does the student have the same opportunities for breaks as students without disabilities, so he or she has time to just be a kid?

Answers to these and other questions that arise as a result of scheduling may lead your team to rethink the range of learning outcomes in the student's program as well as how to adapt instruction. A completed student schedule provides increased clarity to expectations for a student's participation throughout the school day. By looking at the schedule, a teacher or assistant would know what the instructional focus should be for a student with disabilities when he or she is in any class. Of course, each of the teachers should be involved in making such decisions. As the student progresses through the school year and as team members learn more about the student, the schedule should be adjusted accordingly.

The Osborn-Parnes Creative Problem-Solving Process (CPS) (Parnes, 1997) is a powerful tool to assist teachers as they create adaptations to their curriculum, instruction, and activities. Variations of the CPS process have developed specifically to address curricular and instructional adaptation issues as they pertain to curriculum-overlapping challenges that occur when students with disabilities are included in general education classes and activities (Giangreco, 1993; Giangreco, Cloninger, Dennis, & Edelman, 1994). Once a teacher or team has identified the general problem (e.g., "In what ways might we address Karen's individual education needs within the context of typical class activities with nondisabled peers?" they can use the remaining steps of CPS as a creative process to generate solutions. These include:

- fact-finding (gathering information),
- problem finding (clarifying the problem),
- idea finding (brainstorming a quantity of ideas in an atmosphere of deferred judgment, using idea-joggers),
- solution finding (selecting the best ideas based on criteria),
- acceptance finding (making a plan, refining it, and taking action).

An overarching characteristic of CPS is the alternating use of divergent and convergent thinking within *each* step. The divergent aspects encour

age the teachers and teams to explore information and ideas broadly by extending in different directions from a common point (the problem to be solved). Convergent aspects encourage analysis of the divergent data to make decisions and select solutions. Most importantly, the steps of CPS assist teachers, support personnel, and students to develop a creative, optimistic attitude and a simple, effective process for solving problems.

How Can Instruction Be Individualized Within the Context of General Class Activities?

The vast majority of students with disabilities respond favorably to many of the same teaching methods that are effective with students who do not have disabilities. Some of these common methods include modeling and demonstration, class discussion, repeated exposure and practice, guided discovery, experiments, field study, participatory activities, use of multimedia technology, use of question-asking strategies, use of manipulative materials, educational games and play, use of positive and negative examples, corrective feedback, and individual or small-group projects. Many of these are described in chapter 1 of this volume.

Sometimes the adaptations that need to be made for students with disabilities are as simple as (a) changing performance expectations (e.g., different spelling words; 10 math problems rather than 20); (b) allowing students to respond in different ways; (c) changing the materials to match the motivational, sensory, or physical characteristics of the student; (d) providing additional time or task completion or responding; (e) providing assistive devices (e.g., tape recorders to take notes, computers); (f) preteaching or tutoring; or (g) modifying the rules of participation. Of course, to be effective, any such adaptations require a working knowledge of a student's characteristics and learning styles.

Challenges arise when students do not progress adequately using typical instructional methods. In such cases, instruction must, be augmented using more precisely and explicitly applied methods. What follows (see Table 3.1) are some instructional methods that can be applied within the context of typical class activities (Alberto & Troutman, 1995; Snell & Brown, 1993). You will recognize that you have used many or all of these strategies before, though you may know them by other labels. Selection of methods should be based on (a) which method, or combination, is most likely to be effective based on your knowledge of the student's characteristics, (b) the characteristics of the learning outcome, and (c) which

TABLE 3.1. *Methods to Augment Typical Classroom Instruction*

Task analysis	Task analysis involves taking a skill and breaking it down into its component parts to facilitate learning. Sometimes these are fairly large chunks of behavior, At other times they are very small. Each step in a task analysis has a built-in cue that serves as a naturally occurring prompt for the next step. You may find that a student is having a problem with a particular part of a skill and that may be the only part that needs to be task analyzed.
Chaining	Chaining can be: (a) continuous (teaching all the steps Of the task analysis); (b) forward (teaching the steps of The task analysis from the beginning until the student Makes an error; instruction proceeds only after the step is mastered); and (c) backward (the teacher arranges the task so that all the steps are complete except the last one; the last step is taught until it is mastered and then the sequence proceeds sequentially backward until the beginning is reached).
Errorless learning	Errorless learning refers to guiding a student through a task using sufficient prompts so that the student can be successful at the task as quickly as possible while making as few errors as possible. Errors are interrupted as they occur and guidance is provided. As the student becomes more proficient, the guidance fades. Errorless learning provides more opportunities for practicing a skill correctly and is useful for tasks where errors just won't do (e.g., crossing the street).
Cue redundancy	Cue redundancy is when you exaggerate the Relevant dimension of a cue to discriminate between it and Other cues. For example, when teaching the difference Between the hour and minute hands on a face clock, length is The relevant dimension (not color or shape). Using cue redundancy, you would exaggerate the difference in length by making the hour hand very short and the minute hand very long, then fade toward more typical lengths.
Shaping	Shaping is simply reinforcing increasingly proficient approximations of skill. For example, in composition, teachers expect increasing detail, description, spelling accuracy, and proper use of grammar. Shaping is by its very nature a developmental process of starting where the child is and moving forward at an individualized pace.

Prompts, cues, and fading	Prompts and cues include approaches such as full physical guidance, partial physical guidance, modeling, verbal directions, questions, reminders, encouragement, and visual clues. Prompts and cues can be provided prior to or following student responses. Prompts and cues should fade as quickly as possible. Using dotted letters in handwriting instruction is an example of a cue that eventually will be faded.
Time delay	Time delay refers to the pairing of two cues simultaneously (zero delay): one cue you know the student will respond to correctly, and the other cue, particularly a natural one, you would like the student to respond to. For example, when teaching a young child to say "Thank you" you want the child to respond to the natural cue of receiving something. You can start teaching this by simultaneously pairing the natural cue (receiving something) with the extra cue, "Say, Thank you," knowing the child will repeat, "Thank you." Once established, a time delay (e.g., a couple of seconds) is inserted between the natural cue and the extra cue and is gradually increased. When the time delay is long enough, the child responds "Thank you" before receiving the extra cue. Extra cues are often faded simultaneously as the time delay increases (e.g., "Say, Thank you"; "What do you say?"; giving an expectant look). Time delay can be especially valuable for teaching students who are not imitative.

method can be applied in the most status-neutral or status-enhancing way in typical settings.

Regardless of what instructional approaches you use to help students learn, most of them require frequent and ongoing opportunities to interact with content or to practice a skill in order to learn it. This is true for students with disabilities as well, and sometimes they need even more opportunities and consistency of instruction.

Any individualization of instruction would be incomplete without some form of evaluation. Teachers often have an intuitive sense of how their students are progressing, but in order to validate those impressions, it is important to gather additional information through some form of systematic data collection. Quizzes, tests, projects, observations, demonstrations, and work samples can all be used to measure progress. These various methods can tell you how accurate the student's responses are, how often

the student uses a skill, how quickly the student accomplishes a task, the student's work quality, the amount of time (duration) a student's attention can be sustained, and the number of steps in a series (i.e., from a task analysis) the student can successfully complete. Ultimately, such information can indicate the student's growth over time and whether the student's quality of life has improved as a result of working on certain learning outcomes. The data collection methods you choose, and the information you look for, should be directly related to the student's learning outcomes.

CONCLUSION

General education teachers are playing new and important roles in educating students with disabilities with the support of special educators, related services personnel, paraprofessionals, and other school staff and community members. Though teaching students with more and more severe disabilities can present challenges, general education teachers can have a major, positive impact on the lives of students with disabilities. By helping to create these new opportunities, teachers will develop skills that improve their teaching of all children and will model many important behaviors for their students without disabilities. Teachers who successfully include students with disabilities demonstrate that they value the uniqueness of each child and model both problem-solving behaviors and coping strategies for dealing with change in constructive ways. In doing so, they help break down barriers that artificially limit students with disabilities and they help debunk stereotypes. As the role of the general education teacher continues to evolve in regard to educating students with disabilities, today's teachers have already demonstrated that inclusive education can be done successfully anywhere competent and caring people choose to extend their own learning on behalf of children.

REFERENCES

Alberto, P.A., & Troutman, A.C. (1995). *Applied behavior analysis for teachers (4th ed.).* Englewood Cliffs: NJ: Prentice-Hall.

Brown, L., Nietupski, J., & Hamre-Nietupski, S. (1976). The criterion of ultimate functioning and public school services for severely handicapped students. In M.A. Thomas (Ed.), *Hey don't forget about me! Education's investment in the severely, profoundly, and multiple handicapped (pp.* 2-15). Reston, VA: Council for Exceptional Children.

Doyle, M. B. (1995). *A qualitative inquiry into the roles and responsibilities of paraeducators who support students with severe disabilities in inclusive classrooms.* Unpublished doctoral dissertation, University of Minnesota, Minneapolis.

Giangreco, M. F. (1997). *Quick-guides to inclusion: Ideas for educating students with disabilities.* Baltimore: Paul H. Brookes.

Giangreco, M. F. (1996a). Extending the "comfort zone" to include every child. *Journal of Early Intervention*, 20, 206-208.

Giangreco, M. F. (1996b). *Vermont interdependent services team approach: A guide to coordinating educational support services.* Baltimore: Paul H. Brookes.

Giangreco, M. F. (1993). Using creative problem solving methods to include students with severe disabilities in general education classroom activities. *Journal of Educational and Psychological Con-*sultation, 4(2), 113-135.

Giangreco, M. F., Baumgart, D., & Doyle, M. B. (1995). How inclusion can facilitate teaching and learning. *Intervention in School and Clinic,* 30, 273-278.

Giangreco, M. F., Cloninger, C., Dennis, R., & Edelman, S. (1994). Problem-solving methods to facilitate inclusive education. In J. Thousand, R. Villa, & A. Nevin (Eds.), *Creativity and collaborative* learning: *A practical guide to empowering students and teachers* (pp. 321-349). Baltimore: Paul H. Brookes.

Giangreco, M. F., Cloninger, C. J., & Iverson, V.S. (1998). *Choosing outcomes and accommodations for children (COACH): A guide to educational planning for students with disabilities* (2nd ed.). Baltimore: Paul H. Brookes.

Giangreco, M. F., Dennis, R. E., Cloninger, C.J., Edelman, S. W., & Schattman, R. (1993). "I've counted Jon": Transformational experiences of teachers educating students with disabilities. *Exceptional Children,* 59. 359-372.

Giangreco, M. F., Edelman, S. W., MacFarland, S., & Luiselli, T. E. (1997) Helping or hovering: Effects of instructional assistant proximity on students with disabilities. *Exceptional Children, 64,* 7-18.

Giangreco, M. F., Edelman, S. W., & Nelson, C. (1998). Impact of support service planning for students who are deaf-blind. *Journal of Visual Impairment and Blindness,* 92(1), 18-29.

Heumann, J. E., & Hehir, T. (1994). *Questions and answers on the least restrictive environment requirements of the Individuals With Disabilities Education Act.* Washington, DC: United States Department of Education, Office of Special Education and Rehabilitation.

Hunt, P., & Goetz, L. (1997). Research on inclusive education programs, practices, and outcomes for students with severe disabilities. *Journal of Special Education,* 31, 3-29.

Laski, F. (1991). Achieving integration during the second revolution. In L. Meyer, L. Brown, & C. Peck (Eds.), *Critical issues in the lives* of *people with severe disabilities (pp.* 409-421). Baltimore: Paul H. Brookes.

Mount, B. (1994). Benefits and limitations of personal futures planning. In V. Bradley, J. Ashbaugh, & B. Blaney (Eds.), *Creating individual supports for people with developmental disabilities: A man*date for change at many levels (pp. 97-108). Baltimore: Paul H. Brookes.

National Center on School Restructuring and Inclusion (1995). *National study of inclusive education* (2nd ed.). New York: Author.

Nietupski, J., Hamne-Nietupski, S., Curtin, S., & Shrikanth, K. (1997). A review of curricular research in severe disabilities from 1976 to 1995 in six selected journals. *Journal of Special Education. 31,* 36-55.

Parnes. S. J. (1997). *Optimize the magic of your mind.* Buffalo, NY: Creative Education Foundation.

Pearpoint, J., Forest, M., & O'Brien, 3. (l996). MAPs, Circles of Friends, and PATH: Powerful tools to help build caring communities. In S. Stainback & W. Stainback (Eds.), *Inclusion: A guide for* educators (pp. 67-86). Baltimore: Paul H. Brookes.

Salisbury, C., Palombaro, M., & Hollowood, T. (1993). On the nature and change of an inclusive elementary school. *Journal of the Association for Persons with Severe Handicaps, 18,* 75-84.

Snell, M. E., & Brown, F. (1993). Instructional planning and implementation. In M.E. Snell (Ed.), *Instruction of students with severe disabilities* (4th ed.). New York: Merrill/MacMillan.

Stainback, S., & Stainback, W. (1996). *Inclusion: A guide for educators.* Baltimore: Paul H. Brookes.

Villa, R. A., & Thousand, J. S. (1995). *Creating an inclusive school.* Alexandria, VA: Association for Supervision and Curriculum Development.

York-Barr, J., Schultz, 1., Doyle, M. B., Kronberg, R., & Crossett, S. (1996). Inclusive schooling in St. Cloud: Perspectives on the process and the people. *Remedial and Special Education, 17,* 92-105.